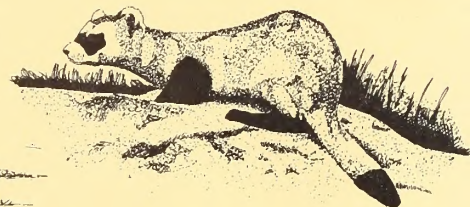




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HABITAT MANAGEMENT PLAN PRAIRIE DOG ECOSYSTEMS



draft



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PRAIRIE DOG ECOSYSTEM HABITAT MANAGEMENT PLAN
FOR PUBLIC LANDS IN MONTANAWildlife Habitat Area MT-02-06-07-S1
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A. Introduction

This Habitat Management Plan (HMP) establishes a plan for managing major wildlife species associated with the prairie dog ecosystem on Bureau administered public lands in Montana. Special emphasis is given to maintaining the habitat of the black-footed ferret, an endangered mammal related to the weasel, whose existence appears to be dependent on prairie dogs. Because little is known of the basic ecological requirements of the ferret and other wildlife species associated with the prairie dog ecosystem, this HMP is necessarily general in nature, and considers four major topics:

1. The establishment of Bureau responsibilities for managing ferret habitat on public lands in Montana.
2. Maintenance of the prairie dog ecosystem as a public resource.
3. Safeguarding the habitats of ecologically sensitive wildlife species associated with the prairie dog ecosystem.
4. Evaluation of reported prairie dog damage to public resources, and assessment of the need for control.

Insufficient data about the prairie dog ecosystem is a limiting factor in each of these issues, and methods are herein prescribed to obtain the necessary information. The acquisition of needed information through field inventories is given priority consideration. The organizational structure of this document conforms to the technical standards of the Bureau of Land Management. It is written primarily as an internal report and assumes the reader has a thorough knowledge of the Bureau's planning system, guidance manuals, and policy directives.

B. Background

Two of the five species of prairie dogs in North America exist in Montana. The black-tailed prairie dog, (Cynomys ludovicianus) is found throughout most of eastern Montana while the white-tailed prairie dog, (Cynomys leucurus), is known only in the southern portion of Carbon County, south of Bridger, Montana. The white-tailed prairie dog is a peripheral species within Montana, and this State constitutes the northern limits of its range.

Because prairie dogs have long been regarded as major competitors of livestock for forage and as "reservoirs" of human infections for sylvatic plague, millions of dollars have been spent in reducing their numbers. There is no record of prairie dogs having caused a case of sylvatic plague in Montana. Massive poisoning campaigns and extensive plowing of the prairie grasslands they inhabit has greatly reduced prairie dog numbers throughout their former range.

Like the prairie dog, the black-footed ferret, (Mustela nigripes), (hereinafter called ferret), was once widely distributed over the grasslands of the central United States and adjacent areas to the west. So close was its association with prairie dogs that the Sioux Indians referred to ferrets as "black-faced prairie dogs". Ferrets appear to be dependent on prairie dog burrows for shelter and the prairie dogs for food. Reductions in prairie dog habitat may have also reduced ferret habitat and caused the populations to progressively decline since the early 1900's.

Today, a few areas containing large prairie dog populations still exist in western South Dakota, where the majority of recent ferret sightings have been reported. Only one ferret sighting (1977) in Montana has been confirmed in the last 25 years. Hypothetically, however, habitat for them exists throughout the eastern half of the State.

Ferret research has been limited by the animal's rarity and its nocturnal habits. Little is known of its biology or present distribution, and the management of ferret habitat is currently limited to the maintenance of prairie dog towns. Research into their life history and experimental propagation of ferrets is being conducted at the Fish and Wildlife Service Patuxent Wildlife Research Center. Inventories of prairie dog towns are being conducted to assess the presence of the ferret in North and South Dakota and Wyoming. The Montana Fish and Game Department has compiled reports of ferret sightings, but few follow-up surveys have been made.

Prairie dogs and their burrows also provide key habitat for other wildlife species. Prairie dogs are an important prey species for avian predators including the golden eagle, (Aquila chrysaetos), and the ferruginous hawk (Buteo regalis). Occasional predation also occurs from the Swainson's hawk, (Buteo swainsoni). The marsh hawk, (Circus cyaneus) frequently hunts over prairie dog towns for small rodents. Prairie dogs are consumed extensively by badgers, (Taxidea taxus), and infrequently supplement the diets of coyotes,

(Canis latrans), bobcats, (Lynx rufus), red foxes, (Vulpes vulpes), and long-tailed weasels, (Mustela frenata).

From research conducted in South Dakota, it appears prairie dogs also constitute a major food source in the diet of the endangered northern swift fox, (Vulpes velox hebes). Swift fox natal dens have been found within 3/4 mile of prairie dog towns in South Dakota (Sharpes, 1978). Hoffmann and Pattie, 1968, report the swift fox originally inhabited the entire Great Plains but was greatly reduced in range and abundance through early predator-control programs. Sharpes, 1978 indicates it is expanding its range in western South Dakota and an adult male was taken in southeastern Montana in March, 1978. Although the status of the swift fox in Montana remains to be determined, prairie dog towns in eastern Montana may represent potential habitat for this species.

Besides providing food, prairie dogs construct colonial burrows which provide shelter for numerous wildlife species. The burrows are commonly enlarged by mammalian predators and utilized for dens. The burrowing owl, (Speotyto cunicularia), apparently declining throughout Montana, (Flath, 1978), is largely dependent on prairie dog burrows for nesting, shelter, food supply and social interaction. Prairie dog towns also provide nest sites for the mountain plover (Eupoda montana), a peripheral species in Montana, and McCowen's longspur, (Rhynchophanes mccownii). Both nest where the grass is very short. Sharp-tailed grouse (Pedioecetes phasianellus) and sage grouse (Entrocercus urophasianus) occasionally utilize

prairie dog towns for strutting grounds (McEneaney and Jensen, 1974). Other bird species benefiting from prairie dog towns include the killdeer, (Charadrius vociferus), Eastern kingbird (Tyrannus tyrannus), upland sandpiper (Batramia longicauda), long-billed curlew (Nemenius americanus), and the mourning dove (Zenaidura macroura).

Reptiles, amphibians and small mammals also occasionally utilize the burrows as shelter from predators and for their thermoregulation. Large numbers of snakes are known to utilize specific prairie dog burrows for winter dens. Two uncommon snakes in Montana that may inhabit prairie dog towns in localized regions are the milk snake, (Lampropeltis triangulum), which occurs in the southeast portion of the State along the Wyoming border, and the Dakota toad, (Bufo hemiophrys), known to be in the Highline country north of the Missouri River. Other reptiles using prairie dog burrows are the bullsnake, (Pituophis melanoleucus), and prairie rattlesnake, (Crotalus viridis). Other amphibians may include the tiger salamander, (Ambystoma tigrinum), and the great plains toad, (Bufo cognatus). Among mammals, desert cottontails, (Sylvilagus auduboni), commonly use the burrows of the white-tailed prairie dogs to seek protective shelter. Pronghorn antelope, (Antilocapra americana), and mule deer, (Odocoileus hemionus), were often seen on prairie dog towns on the C.M. Russell National Wildlife Refuge by McEneaney and Jensen, 1974.

Several species of non-game animals associated with the prairie dog ecosystem have been designated as, "species of special concern" by the Montana Fish and Game Department. These species require special management consideration and many may be candidates for protective status by the State. Those designated will be added to the present State list of specially protected non-game wildlife. The ferret and the raptors mentioned above are already fully protected by Montana law.

In the short-grass prairie, a few species of special concern have primary habitat that includes prairie dog towns. These species are: the golden eagle, ferruginous hawk, black-footed ferret, burrowing owl, mountain plover, and swift fox. Species of special concern that may have at least marginal habitat in prairie dog towns include the milk snake, Dakota toad, dickcissel (Spiza americana), prairie falcon (Falco mexicanus), and the plains hognose snake (Heterodon nasicus). The role of the prairie dog as an essential factor to the survival of the above species is undetermined although the ferret, swift fox, and burrowing owl appear to be heavily dependent on them.

Concern for the ferret, swift fox, and prairie dog has generated significant public interest in recent years. Because of its extremely limited numbers, the ferret was designated an endangered mammal by the State of Montana and the U.S. Fish and Wildlife Service, pursuant to the Endangered Species Act of 1973. The swift fox was added to the federal endangered species list in 1979.

Section 7 of the Endangered Species Act requires the Bureau of Land Management to carry out programs for the conservation of the ferret and swift fox on public lands, and ensure that no Bureau action jeopardizes their continued existence or critical habitat. Currently, no critical habitat has been proposed by the Fish and Wildlife Service (FWS) because such a determination is not yet possible due to the rarity of both mammals. A Black Footed Ferret Recovery Plan (hereinafter referred to as Recovery Plan) recommends ferret management responsibilities for the BLM. No recovery team has yet formed for the swift fox.

Besides their ecological importance, prairie dogs are significant from a human interest standpoint. Increasing public demand for non-game species management has placed great emphasis on maintaining active prairie dog towns for nature study, photography, scenic viewing, and recreational shooting on public lands. Numerous articles in outdoor magazines have encouraged sport shooting of prairie dogs. An opposite stand has been taken by wildlife conservation groups who have advocated their complete protection for aesthetic and humane reasons.

Many Montana ranchers, by contrast, have urged that prairie dog populations be significantly reduced on public rangelands where they are regarded as serious competitors for livestock forage. Grazing lessees, especially in Phillips County, Montana, where prairie dog towns are extensive, have long favored control programs.

In Montana, only the black-tailed prairie dog, whose towns frequently occupy several hundred acres, is considered a problem by stockmen. The nature and extent of its reported damage to public lands has not been thoroughly investigated. It is generally accepted that prairie dogs do cause some localized economic loss in certain rangeland and agricultural areas. They remove large quantities of vegetation in the vicinity of their towns, causing the land to be denuded. Since prairie dogs depend on their ability to detect predators at a distance, vegetation obstructing their view is quickly removed. Prairie dogs consume both grasses and forbs, and a majority of their diet includes plant species having some value as livestock forage; however, they often consume plant parts not used by livestock such as seeds, roots, and bulbs. Bonham and Lerwick (1976) reported that grazing by black-tailed prairie dogs in the short-grass prairie favored an increase of buffalo grass, and an invasion of annuals. Also, more plant species were present due to selective grazing on a few preferred species, including blue grama.

Hanson and Gold, (1977), stated that black-tailed prairie dogs are an important ecosystem regulator on shortgrass range as they disturb the soil, increase plant and animal diversity, and cause a decrease in the primary production of the areas they use. This may cause the habitat to be unsuitable for cattle grazing, while enhancing

the habitat of wildlife species associated with the prairie dog ecosystem.

Although having a significant impact on local plant communities, the presence of prairie dogs is most likely a symptom rather than a cause of deteriorating range. McEneaney and Jensen (1974), commonly found black-tailed prairie dogs in the Charles M. Russell National Wildlife Refuge near watering holes where there were heavy concentrations of cattle. Without sequential grazing, such intensive use by livestock often denudes nearby vegetation, prevents successful regrowth, and compacts soils affecting water penetration. Other evidence indicates that over-use of the rangelands by agricultural and livestock interests has created conditions favorable to prairie dog expansion (Weaver and Flory, 1934; Taylor and Davis, 1947; Norris, 1950; Fichter, 1953; Koford, 1958).

Clearly there is a great need for management of prairie dogs on public lands whether they are considered pets or pests. The controversies surrounding their management, and the Bureau's responsibilities for protecting ferret habitat, have prompted this habitat management plan which deals with these issues on a statewide basis.

C. Scope of Plan

The area being considered by this HMP is located in central and eastern Montana, and includes all of the public lands in the State east of the Rocky Mountains. (See Map 1). Total acreage of the habitat area is approximately seventy-one million acres, with approximately six million acres or eight percent of this total being public land. The Bureau also has administrative responsibilities for minerals beneath millions of acres of private surface. The total acreage occupied by prairie dog towns on public and private lands is not known.

The subject area lies within the Northern Great Plains physiographic region. In general, this region is mixed prairie with an understory of numerous prairie grasses, a thin mid-story of shrubs (usually sagebrush), and in the Missouri Breaks and Pryor Mountains, an over-story of coniferous trees, primarily ponderosa pine (Pinus ponderosa). According to Dr. Tom Watson (1978), endangered plant coordinator for Montana, no proposed or existing threatened or endangered plants are known to exist in the vicinity of prairie dog towns.

Numerous intermittent streams bisect the relatively flat to broken country draining into either the Yellowstone or Missouri Rivers. Approximately 500,000 people live within the subject area, supporting a primarily agricultural-based economy dominated by livestock ranching and dryland farming.

Additional information concerning the area, such as land-use capabilities, general biological communities, and current land management programs, is to be found in the Bureau's planning documents and socio-economic profiles for this region.

Although the size of the habitat management area is extensive, this HMP is only concerned with the acreage in the immediate vicinity of prairie dog towns; the overall area is included, so that all prairie dog towns on Montana public lands are considered.

Habitat improvement projects for the ferret and target species are not a major topic of this HMP as opportunities for such projects are presently quite limited. However, the HMP will be modified to include practices beneficial to these animals as they are developed. The recommendations for managing the prairie dog ecosystem proposed by this HMP would only become policy when adopted as decisions in Management Framework Plans (MFPs).

Sikes Act Cordination

The limited opportunities for habitat improvement projects make it impractical to implement this HMP under the Sikes Act. However, it is subject to review by the Montana Fish and Game Department, which has been delegated as lead agency for implementing the Recovery Plan in Montana. Major actions will be coordinated with that agency's non-game program. If future ferret habitat management requires formal interagency cooperation, this HMP can be modified as a Sikes Act Agreement between the Bureau and Montana Fish and Game Department.

This plan is also subject to review by the Black-footed Ferret Recovery Team to ensure that it is consistent with the Recovery Plan, and by the U.S. Fish and Wildlife Service to satisfy the consultation requirements of Section 7 of the Endangered Species Act mentioned above. Section 7 requires consultation on any Bureau action effecting an endangered species.

This HMP would serve as the Bureau's program for implementing the Recovery Plan in Montana after comment by the Montana Department of Fish and Game and the U.S. Fish and Wildlife Service.

D. Management Objectives and Decisions

Because this HMP considers all potential ferret habitat on public lands, it necessarily includes all three BLM Districts in Montana. Due to differences in age and the changes in guidelines under which they were written, applicable Management Framework Plans (MFPs) vary widely in their treatment of prairie dog and ferret habitat management. Objectives and decisions are not uniform nor are they applicable to all existing prairie dog towns on public lands as a result. Management guidelines proposed by this HMP should be considered for preparing or updating Step 1 of MFPs.

To avoid unnecessary repetition, applicable MFP Step 1 activity objectives and the decisions from 21 MFPs of the Lewistown and Miles City District Offices are summarized below. These objectives represent the concerns of the wildlife activity only.

1. Manage wildlife habitat to provide optimum conditions for a maximum variety of native wildlife species.
2. Manage prairie dogs to meet increasing public demands for consumptive and nonconsumptive uses of these species.
3. Minimize impacts to non-game wildlife habitats from surface disturbing activities, particularly mineral and energy related developments.

The following decisions were derived from the above objectives.

1. Identify prairie dog towns on public lands and inventory them for ferret presence. Assess prairie dog populations, rates of town expansion, and prairie dog impacts to other resources. Provide maximum protection to those towns occupied by ferrets.
2. Complete inventories of all threatened and endangered species on public lands. Emphasize inventories on areas of critical environmental concern. Determine critical habitats and preserve these areas.
3. Participate in recovery plan implementation for managing endangered species' habitats. Set Bureau responsibilities in accordance with time limitations given in each recovery plan.
4. Maintain or increase habitat of threatened/endangered species.
5. Designate prairie dog towns for public viewing, emphasizing biological and environmental education.
6. Assess prairie dog damage and implement control only where necessary to prevent significant damage to existing public resources. Non-chemical methods of control such as concentrated sport shooting and artificially increased predation should be considered as control alternatives.

7. Protect and preserve prairie dog towns on public lands for public use. This includes photography, nature study, scenic values, and varmint shooting.
8. Prior to approval, provide for a thorough wildlife review of oil and gas leases, coal licenses, and mineral material sales to mitigate potential threatened/endangered species habitat loss.
9. Allow no surface occupancy for oil and gas exploration within 100 feet of prairie dog towns. Protect prairie dog towns from surface developments such as roads.
10. Acquire private lands containing key wildlife habitats to enhance management capabilities.
11. Prepare an HMP to implement management of prairie dog and ferret habitats.

The above statements are summaries of wildlife management decisions in a number of MFPs that pertain to the management of prairie dogs, ferrets and related non-game species. Not all of these statements appear in each of the 21 MFPs.

No objectives or decisions about prairie dog management have been made in the Butte District where prairie dog towns are not known to exist on public lands.

Decisions to control prairie dog numbers to protect watershed and forage resources are included in MFPs for the Phillips and Judith Resource Areas of the Lewistown District, and the Big Dry and Powder River Resource Areas of the Miles City District.

A majority of these decisions deal with the need for prairie dog control to prevent substantial damage to public resources. No specific problem areas, except in the Phillips Resource Area, have been pin-pointed pending identification of all prairie dog towns on public lands and assessment of their impacts to public resources.

In the Phillips Resource Area, Lewistown District, the control of black-tailed prairie dogs in south Phillips County is identified in the Phillips MFP where numerous and large prairie dog towns exist. Local ranchers and Bureau personnel attribute substantial reductions in livestock forage and deteriorated watershed conditions to the excessive numbers of prairie dogs. This area is identified in Map 2 and Appendix 1.

1. Objectives of the Prairie Dog Ecosystem Habitat Management Plan.

a. Black-Footed Ferret

Ferret habitat on public lands should be maintained to support at least one wild self-sustaining population of ferrets in Montana as prescribed by the Recovery Plan. The means for achieving this objective will be met by implementing Bureau responsibilities set down in the Recovery Plan. This objective would be met in Proposed Action, #1. pp. 25-35 below.

b. Other Wildlife Associated with the Prairie Dog Ecosystem

A sufficient number of prairie dog towns should be maintained on public lands to perpetuate the abundance and diversity of target species associated with this ecosystem. Excluding the ferret, target wildlife species referred to in this document include the swift fox and all non-game species of special concern that utilize prairie dog towns. These species have been identified in the Background section. To accomplish this objective it will be necessary to:

- (1) Identify key habitats of target species.
- (2) Preserve the six known white-tailed prairie dog towns and any others occupying public lands.
- (3) Maintain a sufficient number of black-tailed prairie dog towns to provide optimum habitat conditions for target species.

- (4) Establish mitigating stipulations to minimize habitat loss to target species from surface disturbing activities.
- (5) Institute studies to improve habitat management practices for target species.

This objective would be satisfied by Proposed Action #1, pp. 25-35.

c. Human Interest Values

A sufficient number of black-tailed prairie dog towns should be maintained to support sustained recreation including varmit shooting, sightseeing, and interpretive uses. To attain this goal it would be necessary to:

- (1) Assess current level of recreational use associated with prairie dogs and increase nonconsumptive use at least 15 percent by 1982.

This figure was selected on the basis of the high level nonconsumptive use anticipated for prairie dog towns in the future. It is felt that the present level of use is minimal and that prairie dog towns represent an unrecognized recreation resource with substantial development potential. For this reason, a projected increase of at least 15 percent beyond current levels could reasonably be expected by 1982 through intensive recreational management of selected prairie dog towns.

- (2) Assess demand for recreational prairie dog shooting, and sustain this activity only where it does not conflict with other objectives.

This objective would be met in Proposed Actions #2, pp. 35-38.

d. Prairie Dog Control

As part of a comprehensive program to improve range conditions on public lands, black-tailed prairie dogs should be reduced where documented evidence demonstrates they have caused substantial damage to public resources. Prairie dog control in this capacity, however, would only be implemented where it would not conflict with the other HMP objectives. As part of the control effort, it would be necessary to:

- (1) Identify and evaluate reported damages caused to public resources by prairie dogs, and assess the need for control if necessary.
- (2) Establish methods for implementing control programs where warranted.
- (3) Rehabilitate depleted rangelands in the vicinity of prairie dog towns where damage has been documented.

All protective actions and restrictions proposed by this HMP are subject to approval through the Bureau's planning system before they are implemented.

E. Program Constraints

The following are anticipated to affect the implementation of this HMP:

1. General

- a. The HMP objectives must be consistent with the Black-footed Ferret Recovery Plan and BLM Animal Damage Control Manual.
- b. This HMP is based on the relatively limited amount of information currently available regarding habitat management of the ferret and target species. It will be subject to revision as new inventory methods, life-history data, and refined management objectives are developed.

2. MFP Restrictions

Before toxicant control is begun on public lands in South Phillips County (as identified in the Phillips MFP), reported prairie dog damage to public resources should be documented and quantified. Evidence must support that damages are substantial and warrant the proposed control program. The proposed action would then require an environmental statement.

A survey to ascertain the presence of ferrets and target species would be completed for each subject prairie dog town prior to the commencement of control.

3. Wilderness Review

Approximately 25 areas on public lands within the habitat management region may qualify as wilderness study areas. Review of these tracts for wilderness characteristics will be completed by 1980. Special projects or habitat improvements, proposed for these areas, would receive low priority status until after study areas are cleared for these actions.

4. Recreation

Local prairie dog populations might be substantially reduced through intensive hunting pressure. This could seriously affect associated wildlife communities. Black-tailed prairie dog towns proposed for concentrated public shooting would be subject to a preshooting inventory to ensure that this activity would not jeopardize the existence of ferrets, swift foxes, or any species of special concern. Recreational shooting of specific towns would be limited to maintain a minimum number of animals to support local predator populations.

5. Livestock

Modifications of grazing practices in existing Allotment Management Plans (AMPs) might be necessary to discourage

prairie dog town expansion and reinvasion where control has been implemented. Recommendations to restore rangelands where prairie dog damage has been determined should be considered in updating MFPs and revising AMPs.

6. Lands and Minerals

Actions that could significantly alter existing prairie dog towns should be subject to site-specific wildlife inventories to determine the presence of the ferret and target species. These actions might involve, among others, road and utility line rights-of-way, public sales, free-use permits, oil and gas leases, coal exploration licenses, and other mineral-related actions over which the Bureau exercises authority.

Proposed actions would be subject to reasonable stipulations and modifications to protect the key habitats of the ferret and target species. Avoidance of such areas is the only known effective method of negating impacts from the above actions. There are no known means of mitigating habitat loss to species associated with the prairie dog ecosystem.

F. Proposed Actions

Legislative mandates and public interest have generated new concerns for the management of prairie dogs on public lands since existing Bureau planning documents were approved. To accommodate such concerns, proposals made in the pages to follow should be regarded as MFP, Step 1 recommendations.

1. Implementation of Recovery Plan Responsibilities

Bureau responsibilities, as outlined in the Recovery Plan, will be instituted in this order:

| <u>Priority</u> | <u>Bureau Responsibilities From the Recovery Plan</u> |
|-----------------|---|
| a. | Map and measure prairie dog towns on all BLM public lands in Montana. |
| b. | Locate ferret populations utilizing current techniques and identify occupied habitat. |
| c. | Develop program for managing prairie dog towns on public lands. |
| d. | Apply prototype ferret management plan to local populations. |
| e. | Conduct workshops to explain habitat management program. |
| f. | Inventory wild ferret populations. |
| g. | Survey and evaluate habitat management program. |
| h. | Establish habitat sites for introductions. |
| i. | Initiate selected biological research. |

A detailed explanation of each of these items is listed below.

F. 1. Proposed Actions (Cont'd)

a. Map and Measure Prairie Dog Towns On All BLM Public Lands
in Montana

Prairie dog towns would initially be located through an extensive survey of existing allotment management plans (AMPs), literature surveys, public contacts, aerial photographs, and aerial and ground surveys. Sightings would also be solicited from Bureau field personnel, Montana Fish and Game biologists, Montana Department of Livestock and U.S. Soil Conservation Service representatives, livestock operators, and other knowledgeable individuals.

Aerial photographs could be utilized to identify the larger towns. Priority areas (See Appendix 1) should be flown to locate unrecorded prairie dog towns. Prairie dog towns on privately owned land would be mapped where they overlap private and public land and where the Bureau manages the subsurface minerals beneath private surface. Non-priority areas would be inventoried in an order approved by the district manager. A special filing system of 5x7 index cards would be maintained for storing information on the prairie dog ecosystem including these facts: identification of each town by the legal description of its approximate center, estimated size, range conditions,

evidence of poisoning, summaries of wildlife inventories, management decisions and other data pertinent to town condition and status (See Appendix 2).

After the prairie dog towns have been identified in priority areas, each town would be examined on the ground, a preliminary survey for target species and evidence of ferret activity would be conducted by wildlife biologists trained to identify the habitat and sign of ferrets and target species.

Of lands with private surface/federal minerals status, on-ground inventories would be conducted only where exploitation of the mineral estate is imminent. Each Montana District should maintain copies of index cards for all towns within its boundaries. The prairie dog files would only be available to persons having a need from a professional standpoint.

It is estimated that 30 percent of the prairie dog towns in Montana have been identified, with 925,000 acres in McCone and northern Garfield and Prairie Counties inventoried. All public lands in Montana would be inventoried by 1983.

- F. 1. b. Locate Ferret Populations Utilizing Current Techniques and Identify Occupied Habitat

Prairie dog towns exhibiting evidence of ferret activity during preliminary surveys would be examined intensively to determine whether or not ferrets were actually present. Intensive ferret surveys should be conducted between the approximate dates of July 15 and September 15 as this appears to be the time of dispersal for young ferrets and they would most likely be observed above ground at that time. The principal hours of ferret activity are from the period of twilight to midnight and from 4 a.m. to approximately one hour after sunrise (Hillman, 1968). Nighttime observations should be conducted with starlight scopes or aircraft landing lights. Currently, ferret presence can only be confirmed through direct observation of individuals. More successful inventory techniques will be applied as they develop.

Ferret sightings should also be solicited from those reporting the locations of prairie dog towns. (See P. 25). All reported sightings would be investigated, and credible observations examined in the field to confirm ferret presence. If the reported ferrets were not sighted during inventory efforts, a report to this effect should be prepared. Follow up surveys may be repeated at later dates. Surveys for the swift fox would be conducted concurrently.

If ferret or swift fox sightings are confirmed on public lands, the following procedure would apply:

- (1) The participating biologist would establish the location of the individuals sighted, and determine the total number present.
- (2) A summary of the sighting should be prepared within 24 hours and forwarded to the person coordinating the endangered species program for the Bureau in Montana; the Endangered Species Coordinator (ESC).
- (3) The ESC would contact the appropriate organizations, including the Ferret Recovery Team.
- (4) A task group that may include representatives from BLM, Montana Department of Fish and Game and the Ferret Recovery Team and other recognized ferret authorities would evaluate the sighting and make prompt recommendations for further management action.

Public lands containing key ferret or swift fox habitat might be considered for protective withdrawal and adjoining private lands might be considered for Bureau acquisition.

F. 1. c. Develop Program for Managing Prairie Dog Towns on Public Lands

Prairie dog towns not inhabited by the ferret or kit fox, not proposed for control, and not suited for interpretive development could be managed to preserve and enhance key habitats of other target species. Such a program might include the following factors:

(1) Identification of Key Habitats of Target Species

Prairie dog towns and adjacent areas would be inventoried for key habitats of target species including the nest sites of the burrowing owl, ferruginous hawk, golden eagle, and prairie falcon. Grouse breeding areas would also be identified as would those prairie dog towns with high numbers of the milk snake, Dakota toad, plains hognose snake, and dickcissel. Similarly, towns with exceptionally high species diversity would also be identified.

(2) Preservation of Prairie Dog Towns

Because of the lack of information about the prairie dog ecosystem, the only effective means presently available to protect this habitat is to restrict

certain kinds of activities in these areas such as recreational shooting, off-road vehicle use and other surface-disturbing activities. Towns that should be protected from the disturbances listed above are:

- (a) The six known white-tailed prairie dog towns in Carbon County and any discovered in the future.
- (b) Prairie dog towns determined to support endangered species.
- (c) Prairie dog towns determined to be essential habitat for target species or have exceptionally high species diversity and
- (d) Black-tailed prairie dog towns selected for recreational or educational purposes.

No surface-disturbing activity should be allowed within a minimum of 200 yards of the periphery of towns in the above categories. This distance was selected as the minimum that could reasonably protect ferrets and their habitat from oil and gas drilling operations. (Hillman, Clark, Fortenberry, 1978). The 200-yard stipulation would be subject to modifications resulting from site-specific inventories of wildlife resources and additional mitigating measures recommended by the participating biologist.

If major adverse impacts to any target species cannot be satisfactorily mitigated after the Bureau's review process, the Montana Fish and Game Department should be given an opportunity for comment on the proposed action before management decisions are made. In the case of unmitigated impacts resulting from oil and gas lease developments, site-specific environmental assessments should be prepared as appendices to the Bureau's Oil and Gas Programmatic for Montana.

As a recommended measure to protect the prairie dog towns mentioned above, area managers should consider including the stipulation on Oil and Gas Lease Stipulation, Form MSO 3100-45, viz: "no occupancy or other surface disturbance will be allowed within a minimum of 200 yards of the periphery of black-tailed prairie dog towns designated by the Resource Area Manager." The locations of known towns and the percentage of the lease that would be effected by this stipulation would be identified in the leasing agreement.

When a request is received to stake a drill site where prairie dog towns have not been adequately inventoried, a qualified biologist should make a

field examination of the site. Any prairie dog towns in the four categories would be identified and recommendations would be made for relocation or abandonment of the drill site where appropriate. This information would be forwarded to the requesting company through U.S. Geological Survey for appropriate action. During the site-specific predrill examination, the drill site might be located within the 200 yard periphery of the town if no evidence of the ferret or target wildlife species is identified and the drill site cannot be relocated because of the geophysical target. White-tailed prairie dog towns currently affected by mineral development would be subject to existing surface protection regulations. Additional protection may be provided by criteria in "Bureau Surface Management of Public Lands under U.S. Mining Claims," proposed December 6, 1976. Approval of this document is currently pending.

F. 1. d. Apply Prototype Ferret Management Plan to Local Population

Implementation of this HMP would serve as a general prototype ferret management plan for BLM administered public lands in Montana. Site specific management actions for individual prairie dog towns with ferret populations would be included as appendices to this HMP.

F. 1. e. Conduct Workshops to Explain Habitat Management Program

Wildlife biologists should participate in workshops where training in ferret and target species inventory techniques and biology is provided. Area managers could be informed of their habitat needs through the updating of appropriate wildlife recommendations in Step 4, Unit Resource Analyses and Step 1, MFPs. Educational and public awareness programs should be developed to explain the HMP and its status of implementation to the public. The ESC should participate in interagency ferret and prairie dog workshops to discuss prairie dog ecosystem management on BLM public lands. As new information becomes available, area biologists should update planning recommendations applicable to the management of the prairie dog ecosystem.

f. Inventory Wild Ferret Populations

Continuous inventory of wild populations of ferrets on public lands would be needed to monitor the population status and trend. All towns known to contain ferrets, would be monitored annually during the period of juvenile dispersement in coordination with the Montana Department of Fish and Game. Population trends would be evaluated as methods for assessing the status of ferret populations develop. A yearly summary describing the results of ferret management would be prepared in conjunction with the Bureau's Annual Wildlife Report.

F. 1. g. Survey and Evaluate the Habitat Management Program

A progress report on implementation of the HMP would be issued annually in conjunction with the Bureau's Annual Work Plan (AWP), as well as with the Annual Wildlife Report mentioned above. Manpower and funding requests to meet HMP commitments would be programmed accordingly. Modifications might be made in the HMP, as necessary, to reflect current fiscal restraints and changes in management priorities.

h. Establish Habitat Sites for Introductions

Selected prairie dog towns on public lands might be considered as sites for possible ferret introductions in the event wild ferrets must be relocated. Sites would be identified when the characteristics of ferret habitat are known. Designation and management of approved sites would be consistent with the Bureau's planning system. No action to determine prairie dog towns suitable for introduction is anticipated for at least three years.

i. Initiate Selected Biology Research

The Fish and Wildlife Service should be considered the lead agency for initiating research into ferret biology (e.g., nutritional requirements and population

dynamics). However, the Bureau should fund proposals for research necessary to manage the habitats of the ferret and target species.

Because the Bureau's major wildlife responsibility for public lands is habitat management, studies related to this topic should receive first consideration. Possible research topics are listed in Appendix 4. Other pertinent topics might be encouraged from the scientific community. No priority for Bureau funded research has been designated; it is anticipated that studies would be proposed annually during the Bureau's request for research study submissions.

F. 2. Human Interest Values

The utilization of prairie dogs as a recreational resource on public lands has not been measured. The sport of "varmint hunting" has increased in recent years due to increased leisure time and affluence; such activities provide opportunities for youngsters learning to hunt, for example. Dedicated varmint hunters visit north central Montana from throughout the United States solely to shoot prairie dogs. They invest large amounts of money in highly specialized equipment, and may contribute substantially to local economies during their visits in spring and summer months. (Martin, 1978.)

Concentrated varmint shooting could be actively encouraged on those black-tailed prairie dog towns identified for control (See Prairie Dog Control). Shooting could also be permitted

on other towns where it would not conflict with the preservation of the ferret and target species.

Towns selected for control by concentrated shooting should be publicized annually through the news media and handouts for distribution at Bureau offices. Locations should be widely advertised to attract nonresident hunters; however, these towns should not be identified on Bureau recreation maps because their management status could change in response to intensive shooting pressure. Populations at some towns might become so reduced that hunting would be limited to a rest-rotation basis to sustain this activity. Selected towns should be inventoried annually to assess their suitability for continued shooting. Those exhibiting evidence of the ferret or target species or where prairie dog numbers have been significantly reduced should be periodically closed. Specific management programs could be generated for individual towns by participating biologists and recreation specialists as needed.

Nonconsumptive uses of prairie dogs include public appreciation, photography, and academic study for scientific and educational purposes. Public demand for these types of uses are increasing and should be met by increased interpretive services in the future. Prairie dog towns located within five miles of cities or adjacent to major public access routes could have significant value for recreational use. Those with high educational or interpretive values might be selected for

interpretive development. Potential developments could include interpretive signs, self-guiding tours, and rest area facilities. Interpretive programs should emphasize the ecological roles of prairie dogs on the prairie grasslands of the Northern Great Plains. Specific towns could be developed for environmental educational programs, nature studies, bird watching, photography, and public viewing. Developed sites should be closed to the discharge of firearms for the reasons of public safety. The Bureau should also consider prohibiting other conflicting activities such as off-road vehicle use or intensive camping. Some prairie dog towns might also be maintained without interpretive improvements, as aesthetic components of western scenery.

In order to assess the recreation potential of the prairie dog ecosystem, the current level of visitor use and economic significance should be evaluated. Recreation specialists should assist in an inventory to identify prairie dog towns that have significant recreation potential. They could review the locations of known prairie dog towns and consider candidate sites for recreation and interpretive management. Public involvement in the selection of candidate sites should be solicited from local communities and interest groups. Data could be collected utilizing visitor-field surveys, traffic counters at selected towns, and user questionnaires.

Initiation of this project could be proposed for FY80.

When approved, the proposed recreation visitor survey form, developed at the Bureau's 1978 recreation workshop, should be adopted for the user questionnaire. Form 6160-2, with a continuation sheet, could be used in the interim.

F. 3. Prairie Dog Control

Although black-tailed prairie dogs should be managed primarily to enhance wildlife and recreation values, they should not be allowed to jeopardize other resources on public lands or on adjoining private lands. In some areas, prairie dog numbers might have to be controlled to protect public and private resources. The application of chemical toxicants has been the most effective means of control to reduce or eliminate unwanted prairie dogs heretofore. However, in 1972, Presidential Executive Order 11643 restricted the use of toxicants on public lands. Because this restriction is still in effect and because all control programs on public lands are subject to the Bureau's forthcoming Animal Damage Control (ADC) Manual, this HMP will not prescribe detailed methods for controlling prairie dogs. Rather, it provides guidelines for acquiring the irrefutable evidence of damage that should be necessary to initiate control programs after the ADC manual is approved.

Methods to safeguard endangered species and target species are also presented.

The impacts of prairie dogs on Montana's federal rangelands have not been measured. However, Bureau planning documents have recognized a need for control in south Phillips County where prairie dogs have reportedly caused substantial reductions in forage production, and thereby increasing soil erosion. This may be a localized condition resulting from the exceptionally high concentration of prairie dogs in this region. Such damage has not been reported for the majority of public lands in Montana though other areas might subsequently be identified for control evaluation based on prairie dog town inventories, Grazing Allotment Management Plan (AMP) reviews and additional public input.

Damage reports meeting at least one of the criteria below should be investigated on a priority basis determined by area managers:

- a. Where problem towns are identified in writing by a livestock operator or landowner adjoining federal lands.
- b. Where Bureau land managers have sufficient evidence to suspect range deterioration due to prairie dogs.

Since the corrective action to be applied necessarily depends on the magnitude of the disturbance, a systematic approach to

quantifying prairie dog damage is required. To this end, an interdisciplinary team (hereinafter referred to as the team) should be established to examine public lands where prairie dog damage is reported. This team should include at least a range specialist, a watershed specialist, and a wildlife biologist. It should be responsible for providing data to support any decisions effecting prairie dog control and related restoration of rangelands.

As an initial effort, the team could apply the Bureau's Soil Vegetation Inventory Method at "problem" prairie dog towns to document existing range conditions. This method can be used to make an assessment of range condition based on the departure of existing vegetation from vegetative climax. It is utilized so that present and potential forage can be allocated to competing uses. It can also be used to quantify rangeland deterioration from excessive livestock grazing. Since range conditions are often similar at large prairie dog towns and in areas overgrazed by livestock, the same method of assessing resource damages should be applicable to both cases. South Phillips County has been proposed as the first area for this assessment. (See Appendix 1).

Using the Soil Vegetation Inventory Method, and other standard techniques for monitoring soil and vegetation conditions as needed, the team could determine range conditions at "problem"

prairie dog towns and adjacent rangelands. Vegetative trends, cover conditions, forage production, and watershed stability could be rated on sample plots, both within subject prairie dog towns and outside their periphery. Additionally, selected prairie dog towns could be monitored to measure annual rates of expansion and vegetation removal. Exclosures might be established to monitor trends in vegetative succession also. Based on a comparative analysis of the results, a successional trend for the area could be projected together with the influence on range condition by prairie dogs, livestock, and other causative factors.

While prairie dogs are commonly associated with rangelands in fair to poor condition, there is little evidence to show they are solely responsible for deterioration and that their eradication alone will result in long-term gains in grassland productivity (Koford, 1958; Clark, 1973). Range depletion often results from a combination of factors of which the prairie dog is but a single element. Other contributing factors may include drought, excessive livestock grazing, poor agricultural practices and other land abuses that deplete vegetative cover. Prairie dog control without concurrent plans to reduce livestock grazing pressure, to reseed, to contour furrow, or to otherwise aid the depleted range may only provide temporary relief (Kalmbach, 1948). In recommending corrective actions, therefore, the team should consider

practices in addition to prairie dog control. Other methods for assessing and resolving associated range problems should be applied as they develop.

The team's findings and recommendations should be incorporated into a comprehensive plan for improving rangeland conditions at subject areas. The resulting data should be used to update baseline information in applicable Unit Resource Analyses (URAs), MFPs, and existing activity plans. Differences between the team's recommendations and existing MFP decisions should be resolved between area managers and the district manager. The team or its equivalent should also be responsible for monitoring the corrective practices to ensure they meet plan objectives.

Implementation would conform to the ADC manual when prairie dog control is recommended. Pre-control inventories would be conducted at each town to determine the presence of the ferret and target species. These inventories would be coordinated with Montana Fish and Game Department and the Fish and Wildlife Service to ensure compliance with recovery plans and the Endangered Species Act. Control proposals should also be coordinated with animal damage control programs of the Montana Department of Livestock and the U.S. Fish and Wildlife Service to the extent provided by the ADC manual. The application of toxicants would require an environmental assessment and consultation with the Fish and Wildlife Service.

The following guidelines should apply where prairie dog control is planned:

- a. Pending site specific analysis, no control actions would be taken on any prairie dog town that contains ferrets or target species that are candidates for state threatened or endangered listing.
- b. Control measures should be applied only as necessary to prevent serious, documented damage to public and private resources. The magnitude of the damage rather than prairie dog abundance should be the primary factor in determining control need.
- c. Concentrated recreational shooting and other nonchemical control alternatives should be applied experimentally to evaluate their usefulness. If successful, they should be considered in addition to toxicants for prairie dog control. Nonchemical alternatives have not been sufficiently investigated to evaluate their effectiveness for widespread application. Recent reports of hunter success in south Phillips County indicate recreational shooting may substantially reduce local prairie dog populations (Martin, 1978). Concentrated recreational shooting at selected areas might be utilized for control

where appropriate. Methods of biological control, including the creation of vegetative barriers to provide additional cover to hide mammalian predators and the installation of perches and nesting platforms to increase raptor predation might also be applied on an experimental basis. Structures for raptors would only be placed at selected locations to limit raptor vulnerability to shooting.

- d. Where control has been applied, selected prairie dog towns should be monitored annually to evaluate success in meeting rangeland improvement objectives.
- e. All toxicant applications and shooting control actions on public lands should immediately be discontinued within a minimum distance of five miles from any confirmed ferret or swift fox sighting. These restrictions should remain in effect pending a biological assessment of continuing the control.

For this program to succeed, it is essential that the Bureau maintain close cooperative relations with local ranchers. Through personal contacts, the team should inform federal range users within subject areas (See Appendix 1) of the impending program and encourage their contributions to it.

This should assist in locating all prairie dog towns on public lands in the vicinity as well as identifying any remaining site specific problems. Range users should be contacted before field investigations begin.

The team's findings and recommendations for rangeland rehabilitation should be presented for public comment through local and public meetings. Resulting public input could then be incorporated into the Bureau's planning system to formulate related land use decisions. Coordination should also be maintained with appropriate state and federal agencies.

G. Coordination With Other Programs and Agencies

Coordination would be accomplished with various governmental agencies:

1. Montana Fish and Game Department

Coordination with the State nongame biologist is needed to ensure that this HMP is consistent with the State's nongame program and the Department's responsibilities as lead agency for ferret recovery efforts in Montana. Expertise from the State nongame biologist would provide supplemental guidance in managing prairie dog towns on public lands for target species.

2. Fish and Wildlife Service

Expertise from the FWS ferret specialist should provide supplemental guidance for updating ferret habitat management practices and inventory techniques. Formal consultation would be requested for the HMP and any prairie dog control programs to ensure compliance with the Endangered Species Act. Where appropriate, the HMP would also be coordinated with the C.M. Russell Wildlife Refuge.

3. Black-Footed Ferret Recovery Team

Review of this HMP by the ferret recovery team should ensure the proposed management program for public lands in Montana is consistent with the recovery plan.

4. Bureau of Land Management

Improvements for user facilities at prairie dog towns indentified for intensive interpretive development might require access, signing, parking and picnicking facilities, and interpretive nature trails. BLM Manual 1609 requires coordination of an activity plan with all other resource programs. The recommendations of this HMP have been coordinated with existing MFP decisions pertinent to prairie dog management. These recommendations might be issued as guidance for future activity plans, to the extent the recommendations are approved in MFPs.

Mineral development could significantly affect the welfare of prairie dog towns. Major portions of public lands within the HMP area have potential for minerals development including bentonite, oil and gas, and coal. In eastern Carter County, uranium exploration has been a recent activity. Four of the white-tailed prairie dog towns in Carbon County are covered by uranium claims, and one town is an active bentonite mine site (See Appendix 3). The Bureau also has surface protection responsibilities on lands with private minerals/federal surface status.

Recent requirements for site-specific examinations and stipulations to protect the environment have been an integral part of the Bureau's mineral use authorizations. Avoidance is the only means of mitigating habitat losses to species associated with prairie dog towns at the present time. With stipulations to modify or relocate projects that may jeopardize key wildlife habitats, environmental impacts should be minimized. Appropriate stipulations should be added to older use authorizations when they are renewed.

Prairie dog towns identified as critical ferret habitat, or containing key habitats of target species might be considered for protective withdrawal. Where applicable, adjoining private lands might be considered for Bureau acquisition. No areas have yet been proposed or identified, and none are anticipated for several years.

Improvements for user facilities at prairie dog towns identified for intensive interpretive development might require access, signing, parking and picnicking facilities, and interpretive nature trails.

Costs and work months for recreation projects and public access for prairie dog towns would be assessed in recreation activity plans. Cadastral surveys and easements across private lands might be needed in some cases.

The interdisciplinary team might also recommend modifications of existing grazing practices and land treatments to restore depleted rangelands. Costs and work months for any restoration would be included in allotment management plans or other project plans.

The HMP will be coordinated with all existing HMPs within the Prairie Dog Ecosystem wildlife habitat area. Generally, the other wildlife habitat plans do not consider management of prairie dog towns, and no overlap or conflicts are anticipated.

H. Environmental Assessment

As the major actions proposed by the HMP are related to inventory projects, no measureable environmental effects are anticipated. Consequently, no environmental assessment for the HMP will be prepared as defined by the BLM 1791 manual. All on-ground projects would require individual environmental assessments if these actions are not already considered in existing documents.

Proposed long-range actions that would require site specific environmental assessments include recreation/interpretive improvements and prairie dog control by toxicants.

In the Lewistown District, a programmatic environmental assessment for wildlife improvement projects has been prepared and would be used where applicable to prairie dog towns.

I. Implementation Schedule and Cost Estimates

The text of this HMP provides the narrative required by Bureau Manual 1612.26A for program package forms. Five outputs would be produced:

1. The total acreage occupied by prairie dog towns on public lands.
2. The acreage occupied by the habitats of the ferret and target species.
3. The acreage inspected for reported prairie dog damage and any resultant acreage requiring rehabilitation.
4. The acreage of rangeland treated and successfully rehabilitated.
5. User days at prairie dog towns.
6. Acreage specifically managed to perpetuate wildlife habitats associated with the prairie dog ecosystem.

Estimated total cost for implementing the HMP during the first year (FY80) is \$25,000 utilizing a total of 14 work months in the Lewistown and Miles City Districts. This cost figure is only slightly higher than that recommended by the Recovery Plan for the

Bureau's first year expenditure in Montana (20.6 thousand dollars). Programming for the outyears beyond FY80 would be contingent upon previous year's accomplishments.

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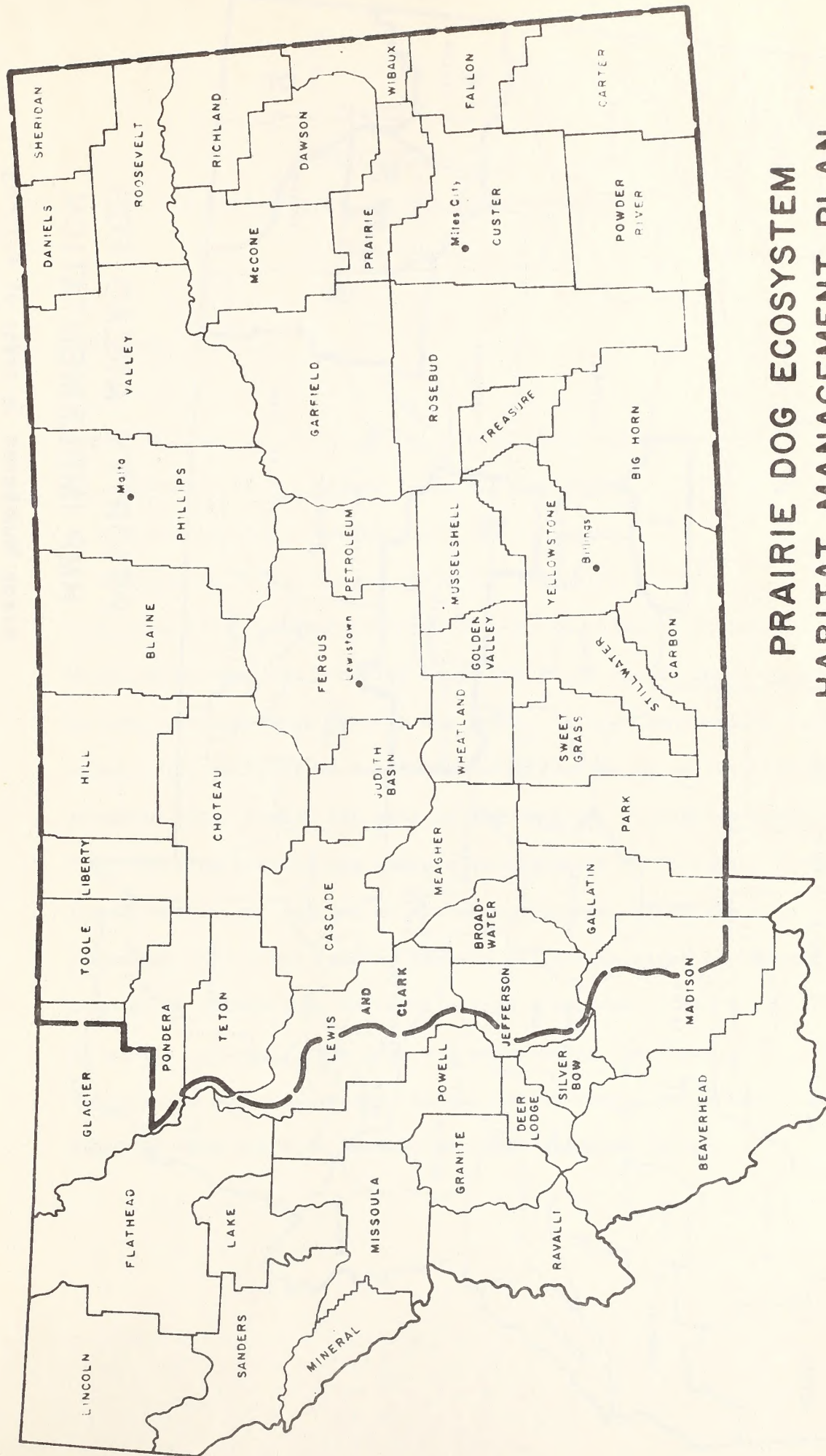
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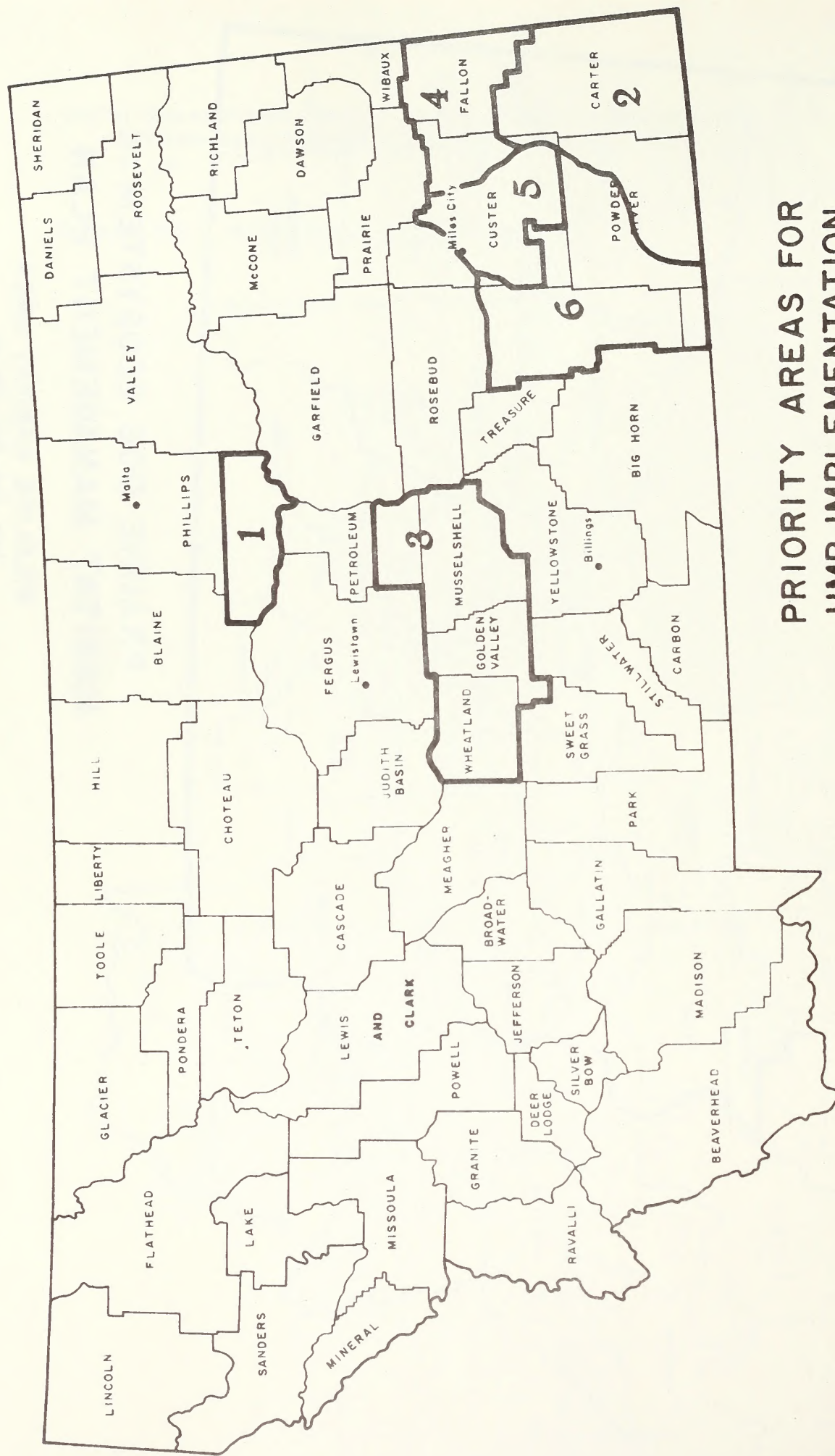
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PRAIRIE DOG ECOSYSTEM HABITAT MANAGEMENT PLAN

WILDLIFE HABITAT AREA
MT-02-06-07-SI



PRIORITY AREAS FOR HMP IMPLEMENTATION

Areas Numbered in order of Priority

Appendix 1
Description of
Priority Areas for HMP Implementation

(See Map 2)

1. Lewistown District

South Phillips County Legal Description by townships:

Township 22 N., Ranges 27-29 E., inclusive

Township 23 N., Ranges 23-31 E., inclusive

Township 24 N., Ranges 26-30 E., inclusive

This area lies immediately north of the C.M. Russell National Wildlife Refuge, and contains large tracts of public lands occupied by numerous and large prairie dog towns. A few towns exceed 1,000 acres. The sparsity of vegetation over such an extensive area has prompted local demand for prairie dog control. Livestock operators feel reducing prairie dog numbers would result in increased forage for livestock and improve watershed conditions. They are also concerned that their federal grazing privileges might be reduced because of forage lost to prairie dogs. Because of the intensity of public interest, this area was selected as the first priority for prairie dog management. Additionally, ferret signs have been reported from the C.M. Russell National Wildlife Refuge.

2. Miles City District - Box Elder Planning Unit.

This area was selected on the basis of the number of confirmed ferret sightings in Montana and the adjoining areas of South Dakota and Wyoming. The most recent observation was of a single ferret sighted on a large black-tailed prairie dog town south of Baker, Montana, on September 13, 1977. The town occupies private land although four scattered tracts of public land (totalling approximately 180 acres) exist within three miles of the site. In the same region, a ferret was killed on the highway near Alzada, Montana, in 1953.

Prairie dog towns occupying federal surface, and those on private surface with federally owned subsurface, could be jeopardized by increased minerals development, particularly uranium and oil and gas operations. Only minimal information about prairie dog towns has been compiled for this planning unit, and a planning update is due in the near future.

3. Lewistown District - Small, scattered tracts of public lands in Wheatland and Golden Valley Counties and large tracts of public lands in Musselshell County and South Petroleum County.

Although no reports have been confirmed, repeated sightings in this region within the last eight years indicate a high possibility of ferrets.

4. Miles City District - Baker Planning Unit

Numerous prairie dog towns exist within the planning unit where there have been ferret sightings. A coal lease nomination site exists near the town of Knowlton, and several oil fields are in production in the area. Only minimal information about prairie dog towns has been compiled for this planning unit, and a planning update is due in the near future.

5. Miles City District - Custer Planning Unit

Although more distant from the area of ferret sightings, Custer Planning Unit contains numerous prairie dog towns. No planning efforts have been attempted for this area, and information concerning prairie dog towns is minimal. Miles City, a major community, lies within this planning unit, and varmint shooting of prairie dogs is anticipated to be high. The potential for coal development is also high.

6. Miles City - South Rosebud, Coalwood, and Decker - Birney Planning Units.

Short-term coal leasing on public lands has been identified for each of these planning units. A few prairie dog towns exist throughout the area, and most of their locations are known. Although none exist within the short-term lease areas, nearby prairie dog towns require intensive wildlife surveys to assess potential impacts to the ferret and target species.

Appendix 2

Sample Format for Prairie Dog Town Index Card

T. 13 S., R. 29 E

Cynomys County

Hogbreath Planning Unit - Big Mac AMP

1. Town Center: NW $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 10
2. Estimated Size: 20 acres - Approximately 15 mounds per acre.
3. Expansion: Evidence of pioneering on south side. 3 new burrows at periphery of town.
4. Access: 300 yards from unimproved public road.
5. Nearby Improvements: 1 reservoir approximately $\frac{1}{4}$ mile to east.
Utility line 300 yards west.
6. Estimated Range Condition: Poor to fair for town and surrounding area.
Photos: 3 photos of possible ferret sign.
7. Public Use: Included in school nature study trip 05/10/77. A few shell casings found on town. No prairie dog hunting questionnaires identified use at this town.
8. Public Concern: Prairie dog control has not been requested for this area.

9. Wildlife Surveys: 1 survey by BLM completed 09/01/77.

Summary: 2 possible ferret trenches, 1 active burrowing owl nest site observed, 2 golden eagles flew over town. One cottonwood tree with an old ferruginous hawk nest 200 yards from the town.

Planning Recommendation: Manage as noncritical habitat.

Additional Information: Town was surveyed for 2 nights with starlite scope by MDF&G and BLM 08/27/78. No ferrets observed.

10. Studies Conducted: This town was selected as a research site to study raptor predation on prairie dogs. Study to be completed in Spring 1980.

Appendix 3

Size and location of white-tailed prairie dog towns on public lands in Carbon County, Montana (Flath, 1978).

| <u>Estimated Acreage</u> | <u>Location</u> |
|--------------------------|--|
| 24 | Sections 26, 27, T. 9 S., R. 20 E. |
| 80 | Sections 26, 35, T. 9 S., R. 25 E. |
| 50 - 80 | Section 19, T. 9 S., R. 26 E. ¹ |
| 40 - 60 | Section 31, T. 9 S., R. 27 E. ² |
| 20 - 50 | Section 30, T. 9 S., R. 27 E. ² |
| 3 | Section 26, T. 9 S., R. 26 E. ² |

1. Active bentonite mine site

2. Covered by uranium claims

Appendix 4

Candidate Research Topics for Bureau Funding

1. The ecological and economic impacts of black-tailed prairie dogs on public rangelands.
2. An evaluation of the success of nonchemical methods in controlling prairie dogs on Montana public lands.
3. The recreation potential and economic value of prairie dog towns on public lands.
4. The impact of recreational shooting and prairie dog control on local predator prey bases.
5. The habitat characteristics of each species of special concern associated with the prairie dog ecosystem.
6. Factors causing prairie dog town expansion.
7. The influence of land use practices on the stability of the prairie dog ecosystem.
8. A description of the physical parameters of prairie dog towns.
9. The role of prairie dogs as a prey base.
10. Improving ferret inventory techniques for large scale surveys of public lands.

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